

PREF TSI Timber Sale Report

I. Location

The sale area is 153 acres in size and is located in sections 26, 27, and 34 T.58N., R.4W., Boise Meridian, Bonner County, Idaho. The timber stand atlas compartment number is 857, Priest Lake Ranger District, Idaho Panhandle National Forests. Harvest is planned on 46 acres. The sale lies in the Benton Creek drainage. The sale area is located approximately 12 miles north of Priest River, adjacent to the Experimental Forest.

II. Relationship to the Environmental Document and Other Uses

This sale is prepared under the direction of the PREF Timber Stand Improvement Continuing Research Project Decision Memo approved by the District Ranger on May 23, 2011. The purpose of the sale is to continue research studies that were started in 1997 using a technique called free selection, and initiate one new study.

This sale lies in the Priest River Experimental Forest within Forest Plan Management Area 14 (RNA) – Research Natural Areas and Experimental Forests. Experimental Forests provide areas for manipulative research. Timber harvesting may occur for research purposes.

A. Private Land/Right-of-Way: None.

B. Threatened, Endangered, (T&E) and Sensitive Species: If any T & E species are found during project implementation, management activities would be altered to protect the species under the contract. To date, no known T & E species have been found in the sale area.

C. Wetlands/Streamside Habitats: No activities would take place within designated Riparian Habitat Conservation Areas (RHCA) and/or riparian buffers. No machinery will operate within the Benton Creek RHCA and no trees will be removed with the exception of incidental firewood to be used at the PREF headquarters facilities. A Streamside Management Zone (SMZ) has been identified in unit 1 with orange flagging where trees can be cut and removed, but equipment is prohibited. There is a protected streamcourse adjacent to unit 5, where equipment is prohibited.

D. Special Uses, Mining Claims, Range Allotments: None.

E. Noxious Weeds: Weed mitigation measures and prevention practices will occur (using contract provisions) and include pressure washing machinery prior to being allowed to operate in the project area. The purchaser will be required to seed landings.

- F. Cultural Resources and Recreation:** A cultural resource site has been located adjacent to the north end of cutting unit 8. It has been protected by providing for no-activity buffer area around the site.
- G. Wildlife:** The project will manage for future attainment of at least 7 10-inch diameter or larger snags to meet the Forest Plan Standard for Management Area 14 lands. If any endangered, threatened, sensitive or MIS species are discovered within the areas affected by the proposed action, project activities would be altered, in order for the proper protection measures to be taken. No species requiring protection have been found during sale preparation.

Snags and large relic trees felled for safety reason shall remain on site, for wildlife purposes.

- H. Soils:** To maintain soil compaction levels below 15 percent as required by Forest and Regional Soil Quality Standards the following guidelines will be adhered to. All new log forwarder trails will be designated and approved by the sale administrator prior to their construction and machinery will operate on existing roads and trails whenever possible. Existing landings will be used whenever possible to avoid further soil impacts.

Management of coarse woody debris and organic matter should follow the USFS Region 1 guidelines from Graham et al. (1994). The recommendation is to leave 17-33 tons per acre for moist sites in all units.

III. Timber Volumes

This sale was cruised in the fall of 2010 using sample tree cruising methods. In the spring of 2011, cutting units were adjusted to buffer cultural resource sites and RHCAs.

Cutting unit acreage was determined with GPS.

This is a weight scale sale with a designed sale error of 30%. Refer to PREF TSI cruise number 81102, run on 7- 19- 2011. The INGY 2 point volume equations were used with a 5.6" top diameter for sawtimber. The sale-as-a-whole error was 7.53% at the 95% confidence level, based on net volume, and can be found in Table DS1. Strata errors < 50% were attained for all strata. Table UC5 was used for sawtimber volume. Table R101 was used for appraisal group statistics. Table UC11 was used to determine the number of trees. Non-sawtimber is a mandatory product, including topwood from 5.6" to 2" diameter.

The sale conversion factor is 0.515 mbf/ccf. The average weight conversion factor is 3.014 ton/ccf. The following table summarizes sale acreage and estimated timber volumes by species and unit:

Volumes (CCF)

Unit	Acre	C	DF	GF	H	L	LP	PP	S	WP	Sawlog Total	Non- Saw	Sale Total
1	30	196	21	13	8	114	1	0	2	16	371	14	385
2	2	10	1	1	0	3	0	0	0	1	16	1	17
4	3	22	3	1	1	37	0	0	0	2	66	3	69
5	8	39	4	4	3	19	1	1	1	3	75	4	79
8	3	0	3	3	3	1	0	7	1	4	22	1	23
Total	46	267	32	22	15	174	2	8	4	26	550	23	573
MBF		134	17	12	8	98	1	4	2	15	291	4	295
Tons		667	106	73	56	607	9	31	11	106	1666	61	1727

IV. Marking Plan

Unit boundaries have been marked with orange boundary tags and orange stump marks. Where a cutting unit is adjacent to a road the road is the boundary and no paint was used. Fell trees away from cutting unit boundaries. Since “free selection” is not a prescription approved for use in the Forest Service databases, Units 1, 2, 4, and 5 are prescribed as Single Tree Selection Cuts (4151) and unit 8 is a Commercial Thin (4210).

Individual Tree (Cut Tree Mark): In all cutting units individual trees to be cut are marked with a horizontal stripe of blue paint at d.b.h. and a blue paint mark below stump height.

V. Logging Plan

A. General:

Light-weight small-scale harvesting equipment will be utilized in order to provide for and conduct research on very-low impact harvesting equipment and biomass utilization techniques. Small-scale harvesters and forwarders measuring less than 9 feet wide (generally weighing less than 30,000 pounds) will be required. See special provision C6.42#.

In all harvest units (1, 2, 4, 5, and 8), limb and lop tops to create an adequate slash mat and excess slash can be removed after initial harvest is completed. Slash will be yarded starting from the back of the unit and forwarding toward the landing. Landing slash will be chipped on site and removed from the project area.

Protect all wet areas, streamcourses, cultural resource site, garden plot with surrounding improvements, buildings, and utilities.

B. Sawtimber Characteristics:

	Log Forwarder
Net Volume (CCF)	550
Net Cut Vol/Ac (CCF)	12
Total Acres	46
Total Trees	1404
Ave. External Yard Distance	1000'
Ave. DBH	15.7"

VI. Transportation System

A. Average haul route to sale center:

Road Name	Road Number	Mileage
Ida Point	597D	0.5
Benton Creek	597A	0.6
East Side Road	C440	10.0
State Highway 57	SH57	3.6
US Highway 2	US2	1.0
Total		15.7

B. Road construction or reconstruction: None.

C. Temporary roads: None.

D. Road maintenance: Purchaser will be responsible for recurrent maintenance, including blading and dust abatement (water). A deposit will be collected for vegetative brushing and surface replacement.

E. Road Reconditioning: Purchaser will be required to recondition roads 597A up to the D spur and all of 597A1, including general road blading (1.2 miles).

VII. Erosion Control

A. General:

Application shall be during the period from May 1 to June 15, and/or September 1 to September 30. Seed shall be applied evenly at the rate of 18 pounds per acre (dry site mix) and 200 pounds per acre of fertilizer (16-16-16-4 or 18-18-14-6). Erosion control measures should be done by the end of the normal operating season to prepare for overwintering.

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B. IPNF Standard Moist Site Seed Mix - appropriate for roadside application on low to middle elevation sites that have moderate moisture.

SPECIES	PLS LBS/AC
Slender wheatgrass "Pryor" or "Revenue" (<i>Elymus trachycaulus</i> ssp. <i>trachycaulus</i>)	3.0
Hard fescue "Durar" (<i>Festuca brevipila</i>)	5.0
Mountain brome "Bromar" (<i>Bromus marginatus</i>)	5.0
Annual rye (<i>Lolium multiflorum</i>)	4.0
Streambank wheatgrass "Sodar"	1.0
TOTAL	18.0

Acceptable substitutes: Blue wildrye "Arlington" or "Elkton" (*Elymus glaucus*) @ 3 PLS LBS/AC for slender wheatgrass. Use of Alsike clover has been removed since it would conflict with other resource values (e.g. grizzly bear).

C. Costs:

Seed: 18 lbs/ac x 2 acres = 36 lbs x \$1.67/lb	= \$ 60
Fertilizer: 200 lbs/ac x 2 acres = 400 lbs x \$0.37/lb	= \$ 148
Labor: 2 ac x 1/3 manday/ac x \$ 218/manday	= \$ 145
Transportation: 32 mi/trip x \$.50/mile x 1 trip	= \$ 16
Total Erosion control needs	= \$ 369
Cost/CCF	= \$0.67

VIII. Sale Area Improvement

A. Reforestation: None.

B. KV Other: None.

IX. Hazard Reduction and Site Preparation

A. Purchaser requirements:

Limb and lop tops of cut trees in forwarder trails. Large trees shall be hand felled and bucked. Any slash in excess of down woody debris shall be yarded by forwarding to landing sites; chipped and removed. This material can be utilized for biomass energy.

B. Forest Service requirements: None.

X. Other Provisions

A. Period of contract:

- 1. Normal operating season:** June 1 to October 31.
- 2. Termination date:** October 31, 2012.

B. Purchaser fire liability:

Total number of personnel/crew	2
Number of hours/day	12
Total hours/crew day	24
Hourly rate AD-C firefighter	\$17.40
Average daily cost	418
Average fire length	5 days
Purchaser obligation for fire operation	2,088
Rounded up to the nearest \$100	2,100

XII. Sale Objective Code

Purpose	Activity	Percentage
TC -- Timber Commodity Purpose	01 -- Timber Purpose	10
FS -- Forest Stewardship Purpose	10 -- Forest and Ecosystem Health	90